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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/790,068	03/02/2004	James Michael O'Dwyer	08676.0012.01	2475

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EXAMINER

JOHNSON, STEPHEN

ART UNIT	PAPER NUMBER
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3641

DATE MAILED: 08/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/790,068

Applicant(s)

O'DWYER, JAMES MICHAEL

Examiner

Stephen M. Johnson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 July 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-24 is/are pending in the application.
- 4a) Of the above claim(s) 19-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-18, 23 and 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 12-24 are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/12/2004.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

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1. Applicant's election without traverse of species D (directed to the barrel assembly and associated firing system of figure 4) in the reply filed on 7/22/2005 is acknowledged.

Claims 12-18 and 23-24 read on the elected species and an action on these claims follows. Claims 19-22 are not directed to a barrel assembly in combination with an associated firing system but appear to be directed to the projectile or a projectile stacking. Claims 19-22 are withdrawn from consideration.

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 12-18 and 23-24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The following claim language lacks support in the written specification as originally filed (with regard to the elected species):

- a) "a plurality of external chambers **containing respective propellant charges**" (see claim 12);
- a') "configured to **ignite the propellant charges**" (see claim 12);
- b) "each external chamber is a relatively high pressure chamber **for detonation of the propellant charge**" (see claims 16 and 18);
- c) "each chamber **comprises propellant ignition means**" (claim 17);

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- d) “each projectile comprises a respective external chamber **loaded with a propellant charge**” (claim 17);
- e) “sequentially **by ignition of the propellant charges**” (claim 17);
- f) “**propellant charges arranged externally of the barrel** for propelling respective projectiles” (claim 23);
- g) “**propellant igniters arranged for initiating combustion of the propellant charges**” (claim 23);
- h) “to receive **products of the combustion of the propellant charges**” (claim 23); and
- i) “**from the propellant charges** to the expansion spaces” (claim 23).

4. Claims 12-18 and 23-24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The following claim language lacks an enabling disclosure as originally filed (with regard to the elected species):

- a) “a plurality of external chambers **containing respective propellant charges**” (see claim 12);
- a’) “configured to **ignite the propellant charges**” (see claim 12);
- b) “each external chamber is a relatively high pressure chamber **for detonation of the propellant charge**” (see claims 16 and 18);
- c) “each chamber **comprises propellant ignition means**” (claim 17);

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- d) “each projectile comprises a respective external chamber **loaded with a propellant charge**” (claim 17);
- e) “sequentially **by ignition of the propellant charges**” (claim 17);
- f) “**propellant charges arranged externally of the barrel** for propelling respective projectiles” (claim 23);
- g) “**propellant igniters arranged for initiating combustion of the propellant charges**” (claim 23);
- h) “to receive **products of the combustion of the propellant charges**” (claim 23); and
- i) “**from the propellant charges** to the expansion spaces” (claim 23).

5. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the propellant charges (as claimed in claims 12-18 and 23-24) and the propellant igniters (as claimed in claims 23-24) must be shown or the feature(s) canceled from the claim(s). **No new matter should be entered.**

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an

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application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

6. The drawings are objected to because numerical indicators 52, 53, and 45 (see page 6) are not illustrated. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

7. Claims 12-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 12, line 6, claims "each projectile has a corresponding external chamber". Note

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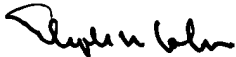
that the external chamber 46 is external to the barrel and certainly not a constituent part of the projectile as claimed. Claim 17, line 6, is indefinite for like reasons.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Billard et al., Lawrence, Thomas Sr., Wrana, and Scott are included as state of the art references. O'Dwyer (329) and O'Dwyer (226 A1) are also included as disclosures of interest.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. Johnson whose telephone number is 571-272-6877. The examiner can normally be reached on Tuesday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on 571-272-6873. The Central FAX phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 800-786-9199.



STEPHEN M. JOHNSON
PRIMARY EXAMINER

Stephen M. Johnson
Primary Examiner
Art Unit 3641

SMJ
August 3, 2005